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ABSTRACT

Using the results of model gifted and talented projects in Ohio (32 during Fiscal Year 1992-93 and 31 during 1994-95), this report provides information to local education agencies to improve the identification of and delivery of services to students who are gifted. Alternative identification strategies such as using a multifactored assessment are reviewed in the context of the underrepresentation of minority groups in gifted and talented programs. The value of a full range of service delivery methods (resource room, separate classrooms, cluster grouping, acceleration, cooperative learning, and the regular classroom) is emphasized, as is the provision of differentiated curriculum to gifted students. Specific individual model projects and their outcomes are reported, in relation to their efforts in meeting the following three priorities: (1) identification of underserved populations; (2) provision of a differentiated curriculum within the regular classroom; and (3) provision of a full range of services to gifted students. The report stresses the importance of professional development in helping teachers develop competencies in differentiating instruction and curriculum. A list of participating school districts completes the report. (Contains 46 references.) (CR)

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NAVIGATING THE WATERS OF CHANGE

Charting a New Course of Action to Improve Identification and Services for Children Who Are Gifted

EC305025

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April 1996

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John M. Goff
Superintendent of Public Instruction

April 1996

Dear Colleagues:

The Ohio Department of Education funded awards to school districts throughout the state of Ohio to improve educational services for children who are gifted. Together, a new course of action is being charted to improve the identification of and delivery of services to Ohio's most able youngsters.

New and innovative approaches were implemented by participating districts. The importance of reevaluating current methods of identification, and designing modifications to broaden the inclusion of otherwise overlooked gifted children, is critical to ensuring that each child's gifts are recognized.

Regular education personnel were included in the network of educators developing a range of services to address the assessed needs of children who are gifted.

The research and demonstration projects highlighted the need for common planning time, professional development, and flexibility in the delivery of appropriate services to meet each child's educational needs. New approaches are increasing the opportunity for family, school, and community members to work in partnership to support the education of all gifted children. Flexible guidelines and budding methodology are increasing our ability to serve gifted children in their regular classrooms, thus benefitting students with various levels of ability.

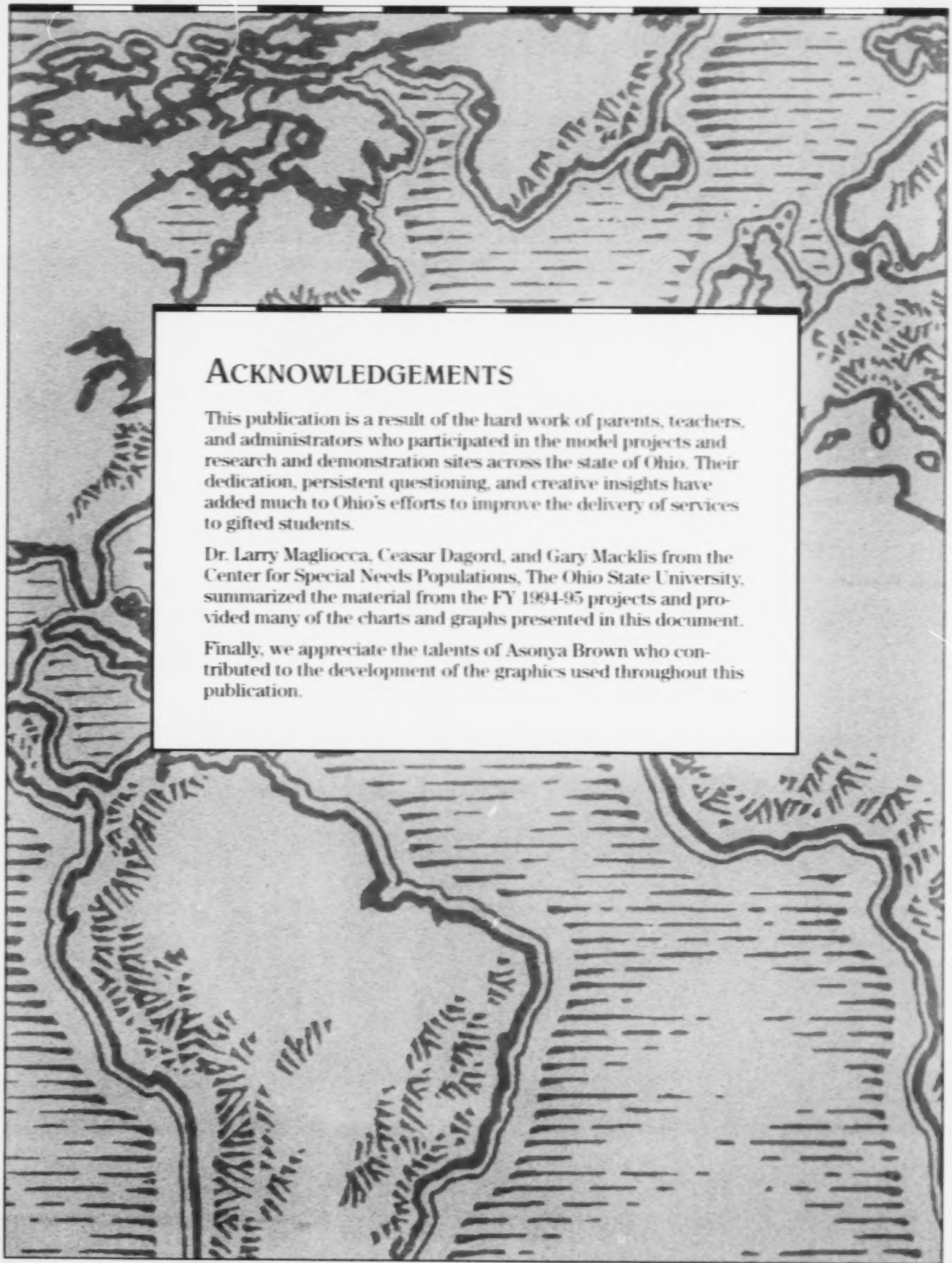
The overwhelming majority of approaches researched in this book are helping all children achieve their potential. Our aim is for academic excellence.

The businesses who joined with us to implement the mentorship programs have served their community, their schools, and their children well. These individuals and the companies they represent deserve our well-earned thanks. Their continued enthusiasm is a shining indicator of progressiveness and dedication to the advancement of educational opportunities for all youngsters.

We encourage you to draw from the successes of the schools described in this document, using their findings as a guide to develop or refine your school's policies for serving all learners.

Sincerely,

John Goff
Superintendent of Public Instruction



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This publication is a result of the hard work of parents, teachers, and administrators who participated in the model projects and research and demonstration sites across the state of Ohio. Their dedication, persistent questioning, and creative insights have added much to Ohio's efforts to improve the delivery of services to gifted students.

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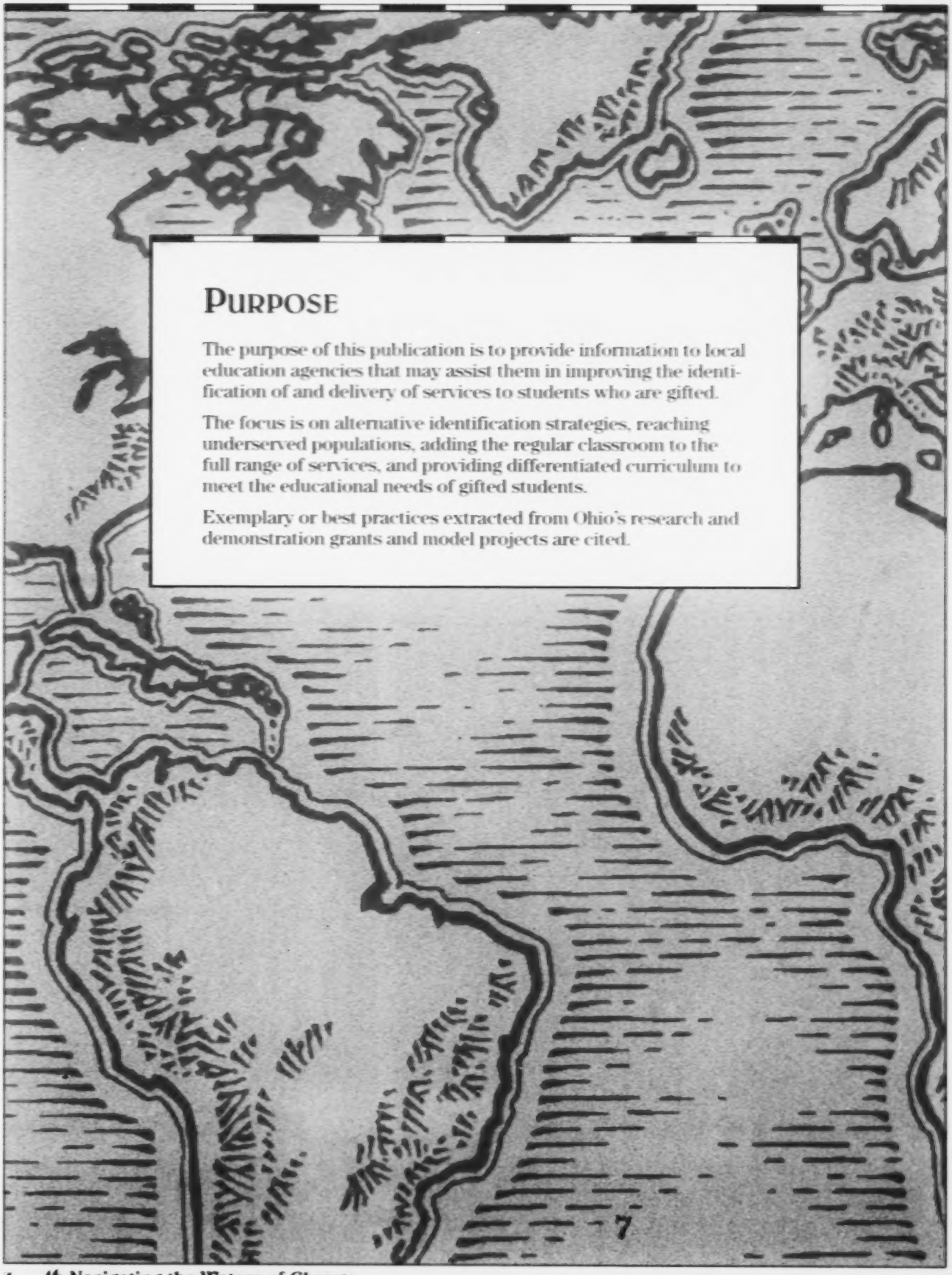
Finally, we appreciate the talents of Asonya Brown who contributed to the development of the graphics used throughout this publication.

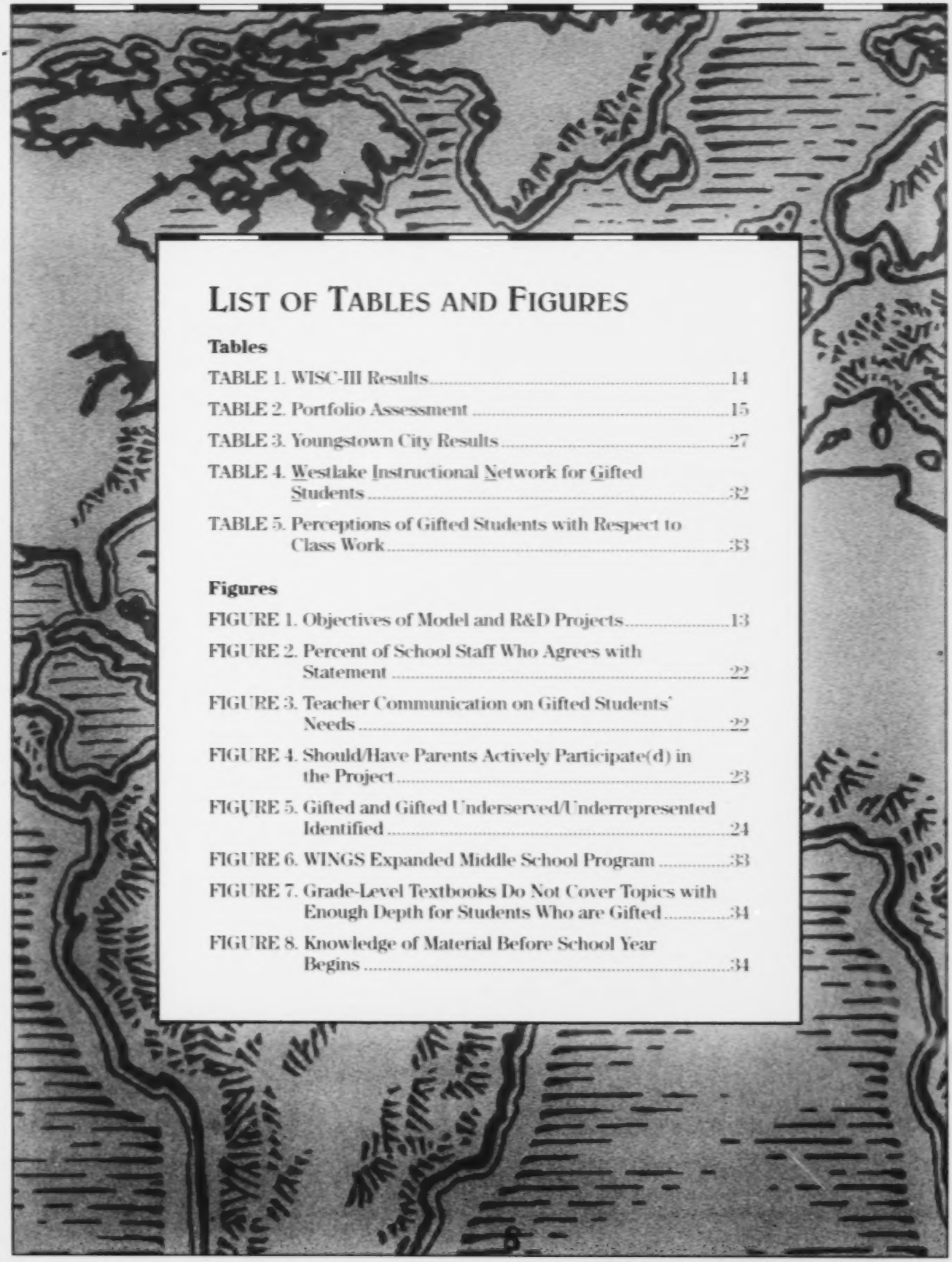


Purpose

The purpose of this publication is to provide information to local education agencies that may assist them in improving the identification of and delivery of services to students who are gifted.

The focus is on alternative identification strategies, reaching underserved populations, adding the regular classroom to the full range of services, and providing differentiated curriculum to meet the educational needs of gifted students.

Exemplary or best practices extracted from Ohio's research and demonstration grants and model projects are cited.



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INTRODUCTION

The U.S. Department of Education's report, *National Excellence: A Case for Developing America's Talent*, speaks of a "quiet crisis" in educating gifted and talented students. The report points out that discussion surrounding problems in education has centered largely on children at risk of failure. "Quiet" refers to the absence of discussion regarding the condition of education for the nation's most able students.

Young children, underachieving children, economically disadvantaged children, children from diverse cultures and minority groups, and adolescent females are rarely identified as gifted by traditional identification systems (Shaklee & Hansford, 1992). They have become the underserved or underrepresented populations.

Being identified as gifted does not automatically mean that adequate services will be provided. In fact, mandates for service do not exist in Ohio and in 19 other states (Coleman & Gallagher, 1995) in the nation. While programs do exist in these states, there are limitations on the number of students served and the types of services provided.

The majority of Ohio's identified gifted students receive gifted education services in resource rooms where they spend approximately five hours per week, or 17 percent of their time receiving *differentiated* services.

"If educators do not think of particular children as gifted, they limit their ability to look at these children as such."

Shaklee & Hansford, 1992

Differentiation, described more fully on page 30, is the process of adapting curricula and instruction — through compacting, enrichment, or enhancement — to meet the individual needs of gifted youngsters. All or most of their education occurs in the regular classroom.

However, teachers may not have the training, experience, or encouragement to differentiate the curriculum, incorporating challenging learning exercises that extend the content or subject matter for gifted students. A national survey revealed that a majority of teachers give the same assignment to both gifted and average students all of the time. Similarly, a follow-up study (Westberg, Archambault, Jr., Dobyns, & Slavin, 1993) found that there was no instructional or curricular differentiation occurring for gifted students in the regular classroom.

Although there is general agreement among educators of the gifted that these students benefit from being with students who are similar to themselves, the delivery of gifted education services in regular education environments — environments where children with varying levels of ability are taught together — is a viable option in the full range of services for meeting the needs of gifted and talented children.

Those involved in serving students who are gifted — parents, teachers, administrators, and students — have embarked upon a journey over "waters of change," characterized by the exploration of new methods of identification and service delivery. By working together, the regular classroom teacher and the teacher of gifted students can ensure that gifted education is not separate and isolated from the regular curriculum, and that the regular curriculum is compacted and extended to meet the needs of gifted and talented students. And, as with all good partnerships, the benefit is reciprocal.

Proposed *Standards for Ohio Schools* have been submitted by the state superintendent of public instruction to the State Board of Education. As a result of input from parents, educators, community members, business

communities, and various organizations, modifications have been made to increase the flexibility afforded to schools in the identification and provision of services to students who are gifted and talented.

The Ohio Department of Education, in an attempt to improve identification methods and services for students who are gifted and talented, has designed and funded demonstration grants and model projects that allow school districts to operate outside the current *Rule for School Foundation Units for Gifted Children* in identifying and serving children through alternative practices.

This report is based on the 63 model projects — 32 projects in fiscal year (FY) 1992-93 and 31 projects in FY 1994-95 — that have operated throughout Ohio over the past four years.

Results of Ohio's model projects, and its federally-funded Ohio Javits Project, have demonstrated the willingness of teachers, parents, and community members to enter into partnerships to create change. The results described in this report are based upon the efforts of these individuals to develop strategies to better serve gifted and talented students across this state. Their insights may be of benefit to others who are planning their own journeys of change.

"Change cannot be accomplished from afar .... The idea that change is learning, change is a journey, problems are our friends, change is resource hungry, change requires the power to manage, and change is systemic all embody the fact that local implementation by everyday teachers, principals, parents, and students is the only way change happens."

Fullan & Miles, 1994

Current Course

Identification

In Ohio, four categories of giftedness are recognized: superior cognitive ability, specific academic ability, creative thinking ability, and visual and/or performing arts ability.

A multifactored assessment is required to identify students as being gifted, the criterion for being identified as gifted usually consists of a score on a standardized intelligence test of two standard deviations above the mean, minus the standard error of measurement, and a score above the ninety-fifth percentile nationally on a standardized achievement test.

"... I believe we are now in an age where we need to think not just in terms of multiple giftedness, but of multiple kinds of giftedness."

Sternberg, 1990

The traditional assessment procedures and measurements used for the identification of the gifted are biased in favor of students whose cognitive style is analytical, rather than global (Young & Fouts, 1993). The assessment most often used measures only one subset (analytical) of one component (cognitive) of giftedness. Sternberg (1990), who warns against conceiving of giftedness as a single construct, conceptualizes giftedness as being comprised of multiple constructs. As a result of work by Sternberg (1990) and Gardner (1983), we no longer view intelligence as being singular.

Nielson (1994) provides an excellent historical background on how our present constructs of giftedness were developed. She begins with two beliefs surrounding giftedness that were commonly accepted around 1900 when Terman began his research: (1) intelligence was hereditary and, in general, geniuses came from distinguished families, and (2) intelligence or talent was followed inevitably by madness or early death. Nielson traces the development of theories that suggest that differences in intelligence were due to gender and race, citing research that demonstrates that Terman's work was not representative of children of all races, but rather of Caucasian children from privileged backgrounds.

From this historical foundation, a profile of gifted children has been constructed for use as a checklist for nominating children for gifted programs. As Nielson points out, "In a circular process, we nominate children based on the 'typical' profile of a gifted child, do research to discover characteristics of gifted children among those whose selection was based on that profile, and conclude that 'our data agree with Terman'."

"Too often, people only see what they expect to find and, when they assume a stereotypical profile of a gifted child, they fail to recognize giftedness in atypical children."

Nielson, 1994

The present socioeconomic composition of identified gifted students who are receiving services suggest that we have not moved very far from the scenario described by Nielson. Giftedness is too often viewed as a single construct that is based solely on innate ability that can only be measured reliably with quantitative methods.

Sternberg and Zhang (1995) suggest a pentagonal implicit theory of giftedness which states that in order to be judged as gifted, a person would need to meet five criteria: (1) the excellence criterion, (2) the rarity criterion, (3) the productivity criterion, (4) the demonstrability criterion, and (5) the value criterion. This theory makes clear that there is no single construct of giftedness, nor a single set of measurements that we ought to use. By uncritically relying on traditional measurements of giftedness, we fail to examine our implicit theories and the values that are reflected in such theories.

By not using a multifactored approach to assessment, we fail to identify those gifted students who would benefit from services. It has been esti-

mated that minority groups are underrepresented in gifted programs throughout the nation by as much as 30 to 70 percent (Richert, 1987).

Young (preschool and primary age) children, underachieving children, children with disabilities, economically disadvantaged children, children from diverse cultures, and adolescent females are other groups who are underrepresented by similar percentages in the gifted population (Shaklee & Hansford, 1992). "The reliance on traditional nominating and testing procedures for the selection of students to participate in programs for the gifted is elitist, racist, and sexist. Merely changing nomination forms or using different psychometric tests will not result in equitable representation of children from all racial and cultural groups in this country" (Nielson, 1994, p. 31).

"How are you going to see the sun if you lie on your stomach?"

Ashanti Proverb

Proposed *Standards for Ohio Schools* provides local districts with more flexibility in identifying gifted children. These proposed standards parallel Goal 2 of *Interacting for Quality Learning: A Gifted Education Plan for the 1990's* (Ohio Department of Education, 1991), which called for improvement in the identification of all gifted students through improved and varied measures, including quantitative and qualitative data gathered from a variety of sources. The plan specifically called for the identification of gifted students from historically underserved populations.

Proposed standards include four categories or areas of giftedness: intellectual area, specific academic area, creative area, and arts area. A multifactored approach requiring three different methods will be used to identify gifted students. Portfolios of products; written documentation from parents, teachers, and/or community members; and checklists have been added to the menu of methods available to local school districts for identification purposes.

Ohio's proposed standards reflect the lessons learned from the model projects and the research and demonstration grants. Observation and multifactored assessment cast a broader net in identifying all children. Children of all ages, both genders, varying abilities and interests, and any ethnic background can be potentially gifted. How we go about looking for these children will, in large measure, determine who we find. And, once children are identified as being gifted, a new set of issues and concerns arises over how services should be provided.

Full Range of Services

Services to gifted students can be provided through a range of service delivery methods (Rogers, 1993). The full range of services can be grouped into three categories: (1) mixed ability settings, (2) ability grouping, and (3) acceleration (Clark & Zimmerman, 1994). Clustering and cooperative learning are methods used within mixed ability settings. Full-time placement in a self-contained classroom or separate school, or the use of resource rooms, are examples of ability grouping. Consolidating two grade levels of work into one, or moving a student into another grade, are examples of acceleration.

Some believe that gifted students benefit from special environments. For example, Coleman (1995) suggests that special environments create a social context that allows for the development of knowledge, skills, and attitudes that are unlikely to occur in the regular classroom. Others (Cohen, Duncan, & Cohen, 1994; Delcourt, Loyd, Cornell, & Goldberg, 1994; Moon, Feldhusen, & Dillon, 1994; Kulik & Kulik, 1992; Rogers, 1991) report increases in academic gains and social development, higher test scores,

more positive feelings toward learning, and a greater degree of independence.

There is not universal agreement regarding the effect of special environments on the performance of gifted students. Slavin (1990) argues that research supporting ability grouping for the gifted is flawed, and recommends against the use of homogeneous ability grouping before the tenth grade. Acceleration and grouping, such as cooperative learning within mixed ability classes, are offered as alternatives. George (1988) and Oakes (1985) argue that such grouping may deny those students not identified as gifted — especially at-risk students — access to knowledge that society considers high status. Ability grouping is seen as conscripting someone to a particular kind of knowledge, thereby limiting their movement within school and society.

Grouping is often associated with tracking (Feldhusen & Moon, 1992), but Fiedler, Lange, and Winebrenner (1993) call this association a myth. Instead, they define tracking as the *dividing of students into class-size groups based on ability or achievement*. Usually there is a high-ability group, a middle-ability group, and a low-ability group, with very little movement between tracks during the school year or from one year to the next. Ability grouping relates to the regrouping of students to create common instructional levels. Ability grouping is done for the purpose of "placing them with others whose needs are similar to theirs for whatever length of time works best" (p. 5).

Kulik (1992) makes a distinction between ability grouping with curricular adjustments and ability grouping without curricular adjustments. Little improvement is gained from ability grouping with no curricular differentiation and Kulik theorizes that the uniformity of curricula across ability levels is the reason for this result. Cross-grade and within-class grouping, with differentiation of the curriculum, resulted in improvements in academic achievement and self-esteem.

Each of the major grouping methods will be discussed and the research reviewed, highlighting the benefits and disadvantages of each method in meeting gifted students' educational needs.

Resource Room

Resource rooms are used as a method for grouping gifted students for a specific amount of time per day or week. Students are given the opportunity to work at their level of ability in their area of interest and to interact with other gifted children. Much of what is done within resource rooms can be characterized as enrichment activity.

Reported benefits of using resource rooms are "moderate to large" positive effects on student achievement (Kulik & Kulik, 1992) and greater growth in critical thinking and creativity (Rogers, 1991). Delcourt, Loyd, Cornell, and Goldberg (1994) found that students felt more capable in their academics, preferred more challenges, and were more independent than their peers served in separate programs, such as special schools or self-contained classrooms.

Separate Classrooms

Separate or self-contained classrooms are utilized to provide services to gifted students on a full-time basis. The teacher is trained and certified for gifted instruction and there is an expectation that the instruction will be different than what is normally received in the regular classroom. Individual, team, and flexible small-group instruction are used, and students may pursue academic interests at their own level and pace.

Rogers (1991) found that separate classrooms for regular instruction make

no discernible difference in the academic achievement of average and low-ability students, but result in substantial academic gains for gifted students. Delcourt, Loyd, Cornell, and Goldberg (1994) found that gifted students in separate classrooms or separate schools scored higher than gifted students served through other program options. They also found that students in separate classrooms and separate schools were the most reliant on teacher guidance.

Cluster Grouping

Cluster grouping of gifted youth involves the placement of identified gifted students as a group into a heterogeneous classroom, rather than being dispersed among all of the rooms at that grade level (Hoover, Sayler, & Feldhusen, 1993). Cluster grouping differs from the previous types of grouping in that gifted students are receiving all of their instruction in the regular classroom.

Typically, clustered students receive their instruction from one teacher, rather than two, like gifted students who are served in both the regular classroom and the resource room. This allows for more continuity of instruction and results in less disruption from students leaving to attend the resource room. It is expected that the teacher of the cluster group will have training in gifted instruction.

Since clustering is done within the regular classroom it may be a practical option for districts that face barriers or lack resources to create separate classrooms or schools.

Delcourt, Loyd, Cornell, and Goldberg (1994) report that students in resource rooms and within-class program options felt more capable in their academics, sought more challenges, and were more independent than their peers served in separate programs.

Acceleration

Acceleration is the practice of allowing a student to advance through material or grade levels prior to the prescribed timeframe, based on early mastery. Acceleration can take the form of pretesting of students and allowing those who have mastered the material to advance to higher-level activities. Other acceleration options include postsecondary option, curriculum compacting, simultaneous or dual enrollment in different grade levels, grade-skipping, and early entrance and exit.

A concern expressed by parents and educators alike is that acceleration deprives students of critical social experiences, resulting in social and emotional problems. Research shows that, rather than producing academic gaps and "burn-out" as feared by critics, acceleration results in positive psychosocial outcomes and high levels of participant satisfaction (Sayler & Brookshire, 1993; Swiatek, 1993). Acceleration also results in significant academic gains (Rogers, 1991; Slavin 1990).

Cooperative Learning

The research of Robert Slavin of Johns Hopkins University, and Johnson and Johnson from the Cooperative Learning Center at the University of Minnesota is credited for the current cooperative learning movement (Ellett, 1993). Cooperative learning is the use of small groups so that students may work together to further their own learning and to help one another's learning. While cooperative learning groups can be heterogeneous or homogeneous in composition, many cooperative learning models advocate for the use of heterogeneous grouping.

Cooperative learning should emphasize not only content, but social/group dynamic skills, group goals with individual accountability for mastery of material, and face-to-face interaction and involvement of students with one another (Coleman, 1994).

"I don't have to be what you want me to be."

Muhammad Ali

Cooperative learning in mixed-ability groups may be the most controversial of all methods used to group gifted students. Concerns of educators of the gifted stem from the lack of evidence demonstrating that gifted students benefit academically from participating in cooperative learning (Rogers, 1991), the appropriateness of materials for gifted students being used in the group, the fear that cooperative learning may replace differentiating curriculum (Robinson, 1990), and the belief that gifted students are being exploited as junior teachers (Nelson, Gallagher, & Coleman, 1993). The study by Nelson, Gallagher, and Coleman found a wide chasm between the philosophies of cooperative learning educators and educators of the gifted on the issue of heterogeneous and homogeneous grouping. The major area of agreement was the need for more professional development and information.

It is easy to fall into the snare of believing that gifted children are a homogeneous group because they share the characteristic of having the ability to perform at high levels. Yet, even ability levels of gifted students differ in terms of students' rate and breadth of learning. In addition, other differences — related to student interest, gender, race, ethnic heritage, socioeconomic level, the degree to which the student is able-bodied, sexual orientation, the region/section where the student resides (urban/rural/suburban), and religion — also contribute to the variability among students. The same diversity exists among gifted students as exists throughout our society.

It is because of this diversity that a full range of services must be available and used to meet each child's individual needs. No single method will meet all of the needs of all gifted students. Flexibility and differentiation are needed in service delivery models and in instruction of youngsters. Ohio is moving toward a more flexible system that will allow for even greater differentiation in how we meet the needs of gifted students.

Ohio's current rule allows for services to be provided to gifted students through acceleration, independent study, guidance services, clustering, a resource room, or a self-contained classroom. The state reimburses local districts only for teachers operating in resource rooms or self-contained classrooms. Teachers of the gifted serve up to 60 children in resource rooms — with a recommendation of not more than 15 students served at any one time — and 20 in self-contained classrooms.

Much of what is contained in Ohio's proposed *Standards for Ohio Schools* was field tested by districts participating in the model projects and/or research and demonstration grants. The following section will describe programs from selected sites (see the complete listing of participating districts beginning on page 40) and the best practices that were developed as a result of the activities developed by school personnel and families working together to meet each child's educational needs.

Exploring New Worlds

Ohio Model Projects and R&D Sites

Thirty-two districts participated during FY 1992-93 and 31 districts during FY 1994-95 in Ohio model projects and as research and demonstration sites. The objectives of these projects are listed in Figure 1.

Figure 1. Objectives of Model and R&D Projects

A. Increase/develop collaboration between regular education and the gifted education staff;
B. Involve parents and teachers in the planning, development, and implementation of projects involving gifted and talented students;
C. Train staff and parents to assess gifted students' needs and identify traditionally underserved and/or traditionally non-identified gifted and talented children to provide appropriate services in the regular class;
D. Serve students through collaboration between the regular and gifted education staff;
E. Differentiate practices and curricula to serve identified gifted students in the regular education setting.

(Center for Special Needs Populations, 1996)

The information presented in this publication was compiled from the individual reports provided by FY 1992-93 project personnel, and the evaluation report of the FY 1994-95 projects written by the Center for Special Needs Populations (CSNP).

The Ohio model projects and research and demonstration grant sites created unique and experimental projects to serve as models for other districts within the state. Districts created programs that targeted those priorities contained within Ohio's strategic plan.

This report will address three of those priorities: (1) identifying underserved populations, (2) differentiating curriculum within the regular classroom, and (3) providing a full range of services to meet the educational needs of gifted students. An overview of project goals, objectives, and activities are provided.

Identification of Underserved Populations

Low Socioeconomic Status

Three school districts — Athens City Schools, Elyria City Schools, and Toledo City Schools — worked to identify the underserved population of children with low socioeconomic status (SES). The districts used either high rates of participation in the free and reduced lunch program or Title I enrollment as the criteria for selecting buildings to participate in their respective projects.

Athens City Schools

Athens City School District is located in the Appalachian region of southeastern Ohio and has an enrollment of approximately 3,294 students. It is also the home of Ohio University. Athens County has a median income of $19,169 per household. Twenty-nine percent of all persons in the county live below the poverty level.

The Athens City Schools project targeted grade levels K-3 at two elementary schools (Chauncey elementary and The Plains elementary) as participants. The goals of the project were to (1) develop and implement an effective and appropriate identification process to identify young gifted students with low socioeconomic status, (2) train regular and gifted education teachers and parents to improve their observational analysis skills,

and (3) establish a collaborative organization of parents, regular and gifted education teachers, and university consultants to develop specific curricular modifications for use in the regular classroom and at home.

Consultants from Kent State University worked with teachers from Chauncey and The Plains elementary schools to become aware of primary identifiers of giftedness and how they could be incorporated into the development of student portfolios as an alternative method of identification. Parents and teachers received additional training to improve their observational analysis skills. Material developed by Kent State University from a previous early identification grant project was used to assist both teachers and parents in becoming proficient in identifying young children in school and home environments.

A brochure and video were developed for parents and teachers. The video deals with myths associated with giftedness, barriers to accurate determination of giftedness, developmentally appropriate practices, and primary identifiers of exceptional potential. The brochure provides information about the video and contains checklists of primary identifiers of giftedness.

Teachers utilized portfolios as a data collection method for 186 students. Based on the content of each student's portfolio, teacher recommendations, and the guidance of the consultant, 22 students were selected to receive individualized evaluation, using the *Wechsler Intelligence Scale for Children, 3rd Edition (WISC-III)*. One student scored in the very superior range, two students in the superior range, eleven students in the high average range and eight students in the average range (see Table 1).

Table 1. WISC-III Results

V. Superior		Superior		High		Average	
#	Score	#	Score	#	Score	#	Score
1	130	1	122	1	115	1	106
		1	121	1	111	2	105
				1	110	1	100
				4	109	1	99
				4	107	1	95
						1	94
						1	93

The evaluation of the portfolios of the same 22 students identified two students within the exceptional learner category, one student within the exceptional user category, nine students within the exceptional generator category, five students within the category of students with exceptional motivation, and five students as nonexceptional learners. The portfolio assessment identified three students as being exceptional that the standardized measurement would not have found and that would have resulted in their being ineligible to receive gifted education services.

Table 2. Portfolio Assessment

Exceptional Learner	Exceptional User	Exceptional Generator	Exceptional Motivation	Non-Exceptional
2	1	9	5	5

The project research points to the effectiveness of the individual portfolio in the identification of exceptional potential. A key component was the involvement of the parents. Parents were encouraged to contribute exemplary samples of their children's work to be included in a student portfolio originated by the classroom teacher. Children were also encouraged to make contributions of their own to their portfolios.

Elyria City Schools

Elyria City Schools, located in Lorain County in the northeastern part of the state, has an enrollment of approximately 9,306 students. Elyria is the second largest city in urban Lorain County, which has a median income of $31,098 per household. Twelve percent of the county's residents live below the poverty level.

"Information provided by parents correlates highly with formal standardized measures of intellectual functioning. This information is also predictive of later reading achievement. Research indicates a willingness of parents to be actively involved with educators.

Scrazzin & Stoffan-Roth, 1993

Six elementary schools were selected to participate in the project based on their Title I enrollment or eligibility for Disadvantaged Pupil Program Funds (DPPF) funding. The minority population of the six buildings accounted for 36 percent of the total student population.

Elyria's project used the *DIAL-R*, a screening inventory which was administered to 500 students prior to their entry to kindergarten, and selected 26 students for further study. Eight of these students participated in field testing during phase one of the project. Eighteen were targeted for study during phase two.

A multifactored, multidisciplinary assessment procedure was developed for the purpose of identifying young gifted minority and/or low SES students. The *Stanford-Binet (4th edition)* was used in connection with structured parent interviews *(PRIDE)*, and play-based assessment *(Creative Behaviors Checklist)* to identify gifted students. Using this multifactored approach, eight students were identified as potentially gifted. Three of the eight students, or 38 percent, would not have been identified through the use of standardized tests alone.

The *Creative Behaviors Checklist* was developed locally to provide a system for observing children at play. Play was viewed as a process, providing an opportunity to observe problem-solving and other behavioral characteristics of young gifted children. This play-based assessment addresses the use of both social and reflective behaviors identified as characteristic of bright young children. *PRIDE* — the Preschool and Kindergarten Interest Descriptor — was selected because it provides additional data that might be overlooked by play observation or testing.

One of the by-products of the Elyria project was parental involvement. The project set a goal of increasing parent awareness of the potential of gifted students. One hundred percent of the parents invited participated in project activities. Parents acquired observational and analytical skills along with exposure to the kinds of things that can be done in the classroom and at home to enhance their child's potential.

Toledo City Schools

Toledo City Schools developed *Project Boost* to identify economically disadvantaged gifted students. Toledo is an urban city school district in the northwestern part of the state with an enrollment of 39,415. The district has 61 buildings, 10 of which were selected to participate in this project. The percent of students in these buildings who participated in the free and reduced lunch program ranged from 77.1 percent to 95.9 percent.

The goal of *Project Boost* was to increase the number of students from the 10 targeted buildings who would qualify for the gifted program. No second-grade students from these 10 buildings had qualified for the third grade gifted program the previous year. An additional goal was to provide second-grade teachers in the targeted buildings with training to identify and assist potentially gifted students. The project also called for parental collaboration.

Participating second-grade teachers were provided with training on cultural awareness, the identification of gifted students, and the development of creative and critical thinking skills within the regular classroom. Teachers reported that these techniques worked, not only with the gifted students, but with the whole class as well.

Once identification of potentially gifted students was accomplished, parent workshops began. Parents were given monthly packets of materials — correlated with strategies and lessons teachers were using in the Boost classes — that they could use in working with their children at home. Door prizes and educational toys were used as incentives to encourage parents to attend the monthly meetings. After they attended a few sessions, parents participated in these meetings on a regular basis.

A partnership was formed with the University of Toledo for the benefit of *Project Boost*. The university assisted project teachers by aiding in the identification of gifted students, in the development of classroom demonstration lessons, and in the evaluation of project activities.

Sixty-three students were selected to participate in *Project Boost* during the first year and 58 during the second year. Thirteen students out of the first-year group qualified for participation in *Horizons*, the districtwide gifted program. This represented a selection rate of 21 percent of the *Project Boost* enrollment and 4.3 percent of all second graders in the targeted schools. By the second year, 22 students from *Project Boost* qualified for *Horizons*, representing 38 percent of the *Project Boost* group and five percent of all second graders in the targeted schools.

Young Gifted Students

Young gifted children represent a second underidentified population of gifted youngsters. As the research literature indicates, failure to identify gifted children early delays appropriate intervention and may be a contributing factor to underachievement. Two districts, North Olmsted City Schools and Wood County Schools, developed projects to identify young gifted children.

North Olmsted City Schools

North Olmsted is a suburb of Cleveland in northeastern Ohio and has a population of 35,000 people. The school system serves approximately 5,000 students.

The major purpose of the project was to develop a program and procedures for identifying and teaching young gifted students. North Olmsted collaborated with Kent State University and parent groups to provide in-service training focused on nurturing gifted children through the development of higher-level and creative thinking, and problem solving. Teachers

and parents learned how to observe and assess children using checklists, anecdotal records, questionnaires, and portfolio assessment.

The goals of the project were to (1) develop and field test a program that first teaches higher-level thinking skills in young children and, by doing so, unleashes their gifts and talents, making early identification possible, (2) provide all young students with the opportunity to develop higher-level thinking skills and academic strengths, and (3) train teachers and parents in the skills necessary to accomplish the first two goals.

In addition to attending conferences and visiting other school districts, teachers participated in inservice training to introduce them to techniques and materials on developing higher-level thinking skills and academic strengths. After practicing and using these newly acquired techniques and materials, teachers evaluated them in follow-up inservice sessions where they exchanged and shared successful ideas. Support for teachers was also provided by university resource personnel available to work with teachers on both group and individual bases, gifted education teachers, the curriculum director, and the coordinator of gifted programs.

Parents participated in two meetings that were part of the ongoing parent education program made available through the district. The coordinator of gifted programs discussed how parents could recognize and nurture exceptional potentials in their children and how they could contribute to portfolios used for identification purposes. The coordinator also met monthly with the board of the North Olmsted League for the Education of the Gifted (NOLEDG) to keep them informed of project activities. Parents were also kept informed through the NOLEDG newsletter and through other school publications.

The project used the *Discrepancy Evaluation Model (DEM)*, which matches the original goals and objectives with the final outcomes, to determine goodness of fit and whether the goals and objectives had been met. Data were collected through (1) a needs assessment survey, (2) anecdotal responses to inservice sessions, and (3) a postassessment survey.

The target population of the project was North Olmsted kindergarten through second-grade teachers. Thirty-one teachers participated in the first year of the project, while 35 teachers participated during the second year. While the average number of years of teaching experience of participating teachers was 15.2 years, the teachers indicated that they had minimal to average knowledge about young gifted children. Sixty percent of the pilot teachers had no prior training in gifted child education.

A key component of the project involved providing professional development opportunities to classroom teachers. Results of the needs assessment survey indicated that although pilot teachers felt that the identification of young gifted children was important, they were not comfortable with that responsibility.

By the end of the project, these same teachers felt that, not only was the identification of young gifted children important, but primary classroom teachers were the most important person in the identification of and provision of services to young gifted children. Additional attitudinal changes were reflected in the following teacher comments:

> "I am more open and aware of exceptional potential in children. How are you smart? Not how smart are you?"

"It (the project) brought out strengths that I saw in children that I might have overlooked before, especially in the lower achieving students."

"I started looking at the whole child, finding potential of some kind in every child."

"I never had any gifted students in my four years. This year I had an open mind and saw many potentials. I might have had them before but I classified them as something else in my mind."

"I can see beyond the reading instruction level to see that some of my most motivated and my best problem-solvers are not my top students."

"I've focused more on their strong characteristics than their negative ones."

Teachers reported acquiring a broader view of giftedness, while learning new information on the characteristics of gifted children, identification techniques, the importance of observational techniques including portfolio assessment, how to make curriculum modifications that employ higher-level thinking skills, and how to use interactive and manipulative materials for mathematics and science.

As a direct result of the project, there were more referrals made to the district's gifted program from teachers of children in grades K-2. However, because of the district's eligibility criteria (i.e., IQ score of 130 or above, reading level at least two years above grade level), the number of children at these grade levels actually admitted into the program did not increase. The variety of children's strengths identified by teachers as a result of this project did not always involve an advanced reading level and IQ score. Consequently, one of the recommendations in the final project report suggested that the district reevaluate the criteria by which students are found eligible to receive gifted education services.

Wood County Schools

Wood County Schools also targeted young gifted students. Districts that participated in *Project Discover* were Elmwood Local, Fostoria City, Lake Local, North Baltimore Local, Northwood Local, Otsego Local, and Rossford Exempted Village.

Wood County is located in rural northwestern Ohio. The combined enrollment for the seven participating districts was 11,973 students. The largest district — Fostoria City — had an enrollment of 2,967, while the smallest district — North Baltimore Local — had an enrollment of 835 students.

The goal of *Project Discover* was to use a process-based approach for the identification of young gifted students. During the first year, first-grade teachers were provided inservice regarding the behavioral characteristics of gifted children, higher-level thinking, creative thinking and problem-solving skills, portfolio assessment, and *4MAT Awareness* training. Teachers collected samples of student work for portfolios and anecdotal records. Teachers were also asked to use a cognitive behavioral checklist to rate students at the beginning of the project and again at the end of the collection period to determine indirectly the degree to which project information influenced the teachers' judgments about individual students.

Portfolios were rated both by teachers and independent judges, who had extensive background in teaching gifted children and traditional identification instruments. Correlations were made between teacher ratings, total scores on the portfolio samples, and intellectual aptitude. The *Iowa Cog-*

nitive Abilities Test was used to generate verbal, nonverbal, and quantitative scores, and a two-way analysis of variance (ANOVA) was completed to compare teacher identification to IQ and portfolio scores.

Teacher ratings on the cognitive behavioral checklists did not change significantly between their initial ratings and their final ratings. Teachers may have had well-formed and accurate views of their students prior to training, or they might have chosen not to use evidence collected to modify their assessments. Teacher objections to the general nature of the activities suggest the latter might be the case. Project personnel made changes, based on feedback received from teachers, to the information that was presented.

The project reported that during year two, second-grade teachers nominated 81 of 481 (16.8 percent) students as gifted. The independent raters of portfolios selected 58 of 481 (12.01 percent). The difference between the two groups may have resulted from teachers assessing abilities that were measured by performance characteristics other than portfolio contents.

The analysis of the data demonstrates that teachers were successful in improving their skills in identifying young gifted children. The training that was provided during the second year of the project was used by teachers, not only in seeking to involve gifted children in their classrooms, but also to assess other educational needs.

The project report asserts

> *As valuable as the portfolio collection themselves seem to be, the lessons and structures provided to elicit and teach various higher-order thinking skills ... were exceptionally well received by teachers and students. This allowed differentiation of services for young gifted children that had not been present in the classrooms before. Administrators in the participating districts recognized the value of these activities and encouraged additional training for their faculty.*

Teachers did note that the portfolio process was time consuming and that record keeping was difficult. But, they also noted that the use of portfolios helped them to refine and change their assessments about potentially gifted students. Typical comments were

> "Students were able to do more than I thought they would."
>
> "The portfolios really showed who was improving and who wasn't."
>
> "Some did better than I would have predicted.... Others did worse."

Gifted Minority Students

Minority students comprise a third underserved population. Delaware City Schools developed a project to increase the identification of gifted minority students.

Delaware City Schools

Delaware is the county seat and largest city in Delaware County with a population of approximately 20,000. Located in central Ohio, Delaware is the home of Ohio Wesleyan University. The enrollment of students in the city schools is 3,874. Members of minority populations comprise approximately nine percent of the total enrollment; the largest minority group is African American.

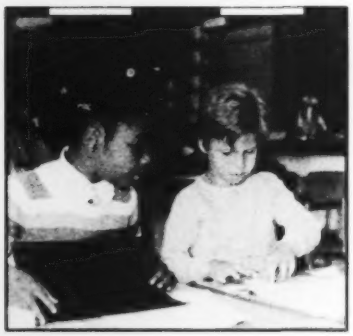
The district has four elementary schools that identify gifted students and use the cluster method within classrooms to provide services. The inter-

mediate school offers advanced science to 20 students from grades 6, 7, and 8 (total of 60 students) in a gifted education classroom. At the beginning of this project, only two of the 60 students, or three percent involved in this class, were minority students.

The goal of the project was to identify more gifted fifth-grade minority students for participation in the middle school science resource room program for gifted students. The project identified two problems with the traditional means of identifying gifted minority students

(1) In general, minority students do not perform as well on standardized tests
   - Content tends to be drawn from the dominant culture rather than minority cultures
   - Intelligence tests and/or achievement tests tend to underidentify minority children with underdeveloped potential

(2) Without adequate training and preparation in the awareness of characteristics of gifted minority children, many teachers are not able to recognize and therefore recommend/nominate minority students for participation in gifted programs.



To remedy this situation, the project decided to use a multifaceted approach to the identification of minority students, using both traditional and nontraditional instruments. The assessment instruments chosen were the *Kingore Observation Inventory (KOI)* and *Drawing Starts*, both of which were developed by Dr. Bertie Kingore of Hardin-Simmons University, the *"Who Do You Know?"* peer evaluation form developed by Dr. Beverly Shaklee of Kent State University, the individually administered *Kaufman Assessment Battery for Children*, and portfolios.

The *KOI* involves a systematic method of recording — over a six-week period — observations of student behaviors that might be indicative of superior ability. Teachers can use the *KOI* with a minimum of training.

Drawing Starts requires students to first use their imagination in creating something from incomplete lines and shapes and then to explain their thinking and write about their completed drawings. *Drawing Starts* is useful in assessing perspective, analysis, and creativity.

"Who Do You Know?" is a peer/self nomination form used by students to identify those who they think display aspects of giftedness as described through specific behavior.

Three subtests of the individually administered *Kaufman Assessment Battery for Children* were used. The matrix analogies test, number recall, and word order were chosen because research indicates that these subtests are not culturally biased against African Americans.

Portfolios have several advantages for assessment. Collection of different kinds of work is encouraged, progress or development of the student's work is viewed over a period of time, children assess their own work, and part of the record and assessment is based on a significant collection of work.

Fifth-grade teachers attended workshops on awareness of cultural differences, traditional and alternative identification procedures, developing student portfolios, and using the *"Who Do You Know?"* form, the *KOI*, *Drawing Starts*, and other selected and guided enrichment activities. Learning styles inventories were completed for all minority students and,

in some cases, intelligence testing using the *Kaufman Assessment Battery for Children*, was conducted.

Five minority students — all of whom were African American — were identified in 1992 and two were identified in 1993. As a result of this project, a total of four out of the seven students were identified for the advanced science class and three for an enrichment science class.

An interesting component of this project was the support given the minority students who were identified. The project committee hired a minority coordinator to support the students selected for the advanced science class. The coordinator provided an opportunity for the students to interact both academically and socially in and out of the classroom setting. The coordinator also acted as a role model for the students, and as a liaison between parents and the school.

Support activities included weekly meetings between the students and the coordinator, meeting with African American students from Ohio Wesleyan University to hear about their experiences as middle school students and as science majors, visiting a college zoology lab, meeting with an African American plant pathologist, attending performances and lectures featuring African Americans, and participating in a community scholarship luncheon where they were recognized as participants in the advanced science room. The project evaluators found that the participation of the minority coordinator played a major role in the success of the project.

CSNP Study

One question posed by the study of FY 1994-95 projects, conducted by The Ohio State University-based Center for Special Needs Populations (CSNP) was whether there was an increase in the collaboration between regular and gifted education staff. If authentic assessment tools, such as portfolios, are to be part of the identification process, it is critical that collaboration occurs between regular classroom teachers and gifted education teachers/coordinators.

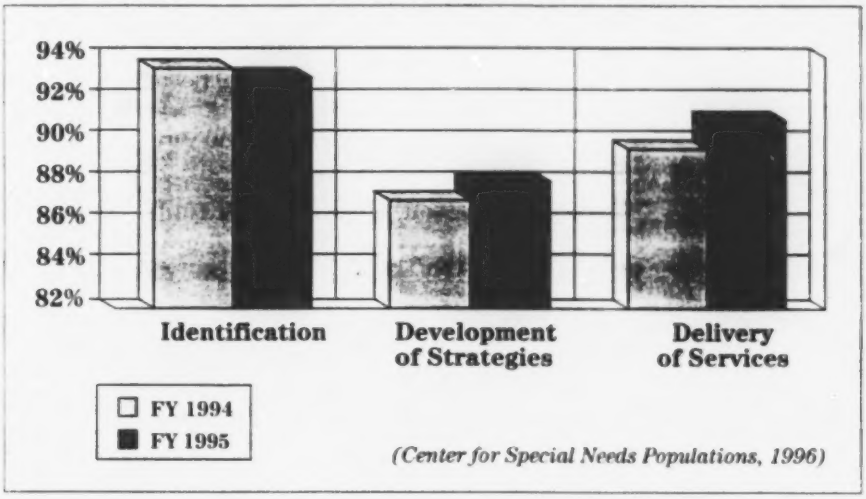
Sixty-five districts participated in the 31 projects during the FY 1994-95 project year (11 of the projects consisted of multiple districts acting as consortiums). Fifty-eight, or 89 percent, of these districts had gifted coordinators at the beginning of the projects. The following two components of the projects contributed to the likelihood of increased participation and interaction between gifted and regular education personnel: (1) regular education staff participated in professional development **with** the gifted education staff, and (2) schools were required to serve students in inclusive experimental units.

At the end of the project, school personnel were asked to indicate agreement or disagreement with this statement

> *The gifted coordinator aids and/or provides technical assistance to other school staff in the identification, development of strategies to address social/emotional needs, and delivery of services to students who are gifted.*

Although there was not a substantial impact from the interaction of gifted coordinators with the school staff, the data show that collaboration between school personnel and the gifted coordinators was already intense in year one of the project (see Figure 2).

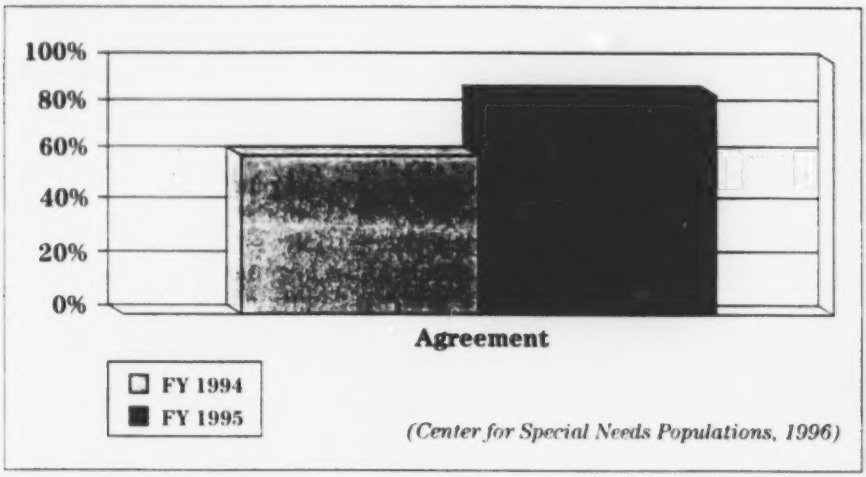
Figure 2. Percent of School Staff Who Agrees with Statement



(Center for Special Needs Populations, 1996)

Figure 3, however, indicates that there **was** a substantial increase from year one and year two in communication among teachers about the needs of gifted students.

Figure 3. Teacher Communication on Gifted Students' Needs



(Center for Special Needs Populations, 1996)

Even though teachers mentioned training and inservice when discussing communication about gifted students, much of the increase seems to have resulted from less formal activities. Teacher and coordinator comments support the idea that collaboration and communication occurred.

> "Some teachers outside of the team that participated in the training are using some of the [gifted coordinator] ideas."
>
> "Yes, we have shared some of what we learned with other staff. We did some inservice of what we have learned."
>
> "In general, teachers learn from each other. Things have been passed on to others. What works and what doesn't work. There is an enthusiasm for the portfolios."

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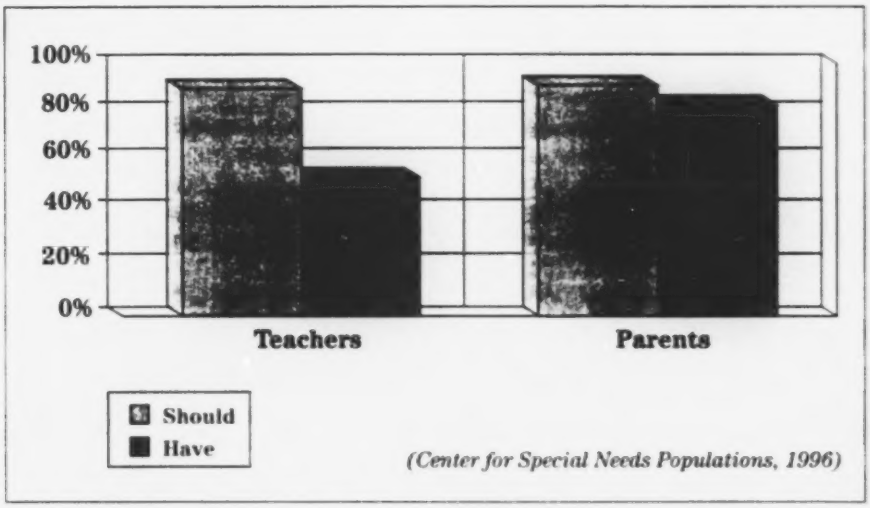
A second target of the CSNP evaluation centered around the issue of parent involvement. Goal 4 of Ohio's strategic plan for gifted education set an objective of increasing opportunities for family, school, and community involvement in the education of all gifted students.

Parents and teachers were asked at the beginning of the project if parents of gifted students should participate actively in a program to ensure its success. At the end of the project, parents and teachers were asked if parents of gifted students had participated in the program.

Figure 4 illustrates the level of agreement between parents and teachers about whether parents of the gifted should actively participate in the program to ensure its success. Ninety percent of the teachers and 93 percent of the parents agreed that parents should be involved. However, there was a difference of opinion between teachers and parents over the extent to which parents actually had been involved. Ninety-two percent of the parents felt that they had participated, while only 54 percent of the teachers agreed that parents had been actively involved in the project.

Figure 4. Should/Have Parents Actively Participate(d) in the Project



(Center for Special Needs Populations, 1996)

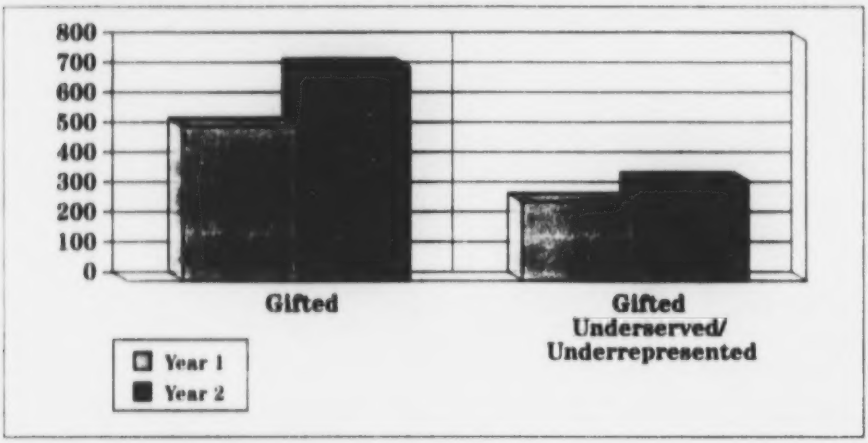
The discrepancy between teachers and parents over the extent to which parents participated in the project may reflect different expectations regarding levels of involvement. That is, teachers may have been expecting parents to be **more** involved than they actually were, while parents judged their involvement as being **sufficient** in their roles. Another explanation might be that respondents to the second survey were parents who were more involved in project and school activities than were the majority of parents. This second explanation assumes that the teachers' responses reflected their perception of how **all** parents were involved in the project.

Clearly, there is agreement between parents and teachers that parents should be active participants in their children's education.

The FY 1994-95 projects provided training to school personnel to aid them in identifying gifted students. The 106 regular classroom teachers reported that they had 509 students who were gifted in their classrooms at the be-

ginning of the project. After the first year of the project, these teachers reported having 715 students who were gifted in their classrooms. The number of students from traditionally underserved/underrepresented groups who were identified as gifted increased, but at a rate less than the general population of gifted youngsters (i.e., 43 and 50 percent, respectively).

Figure 5. Gifted and Gifted Underserved/Underrepresented Identified



The FY 1992-93 and FY 1994-95 model projects experimented with different strategies, resulting in the identification of more students as gifted from historically underserved populations. Suggested best practices are offered as guideposts for other districts that are interested in charting new courses in the identification of and provision of services to gifted students.

Best Practices

- Keep parents and students involved in both the process and the progress made.
- Use multifactored and multidisciplinary methods for identification. Base identification on multiple criteria.
- Use past and present achievements, such as portfolio assessment for identification.
- Consider nominations.
- Encourage the use of phrases like identifying "strengths," "abilities," or "talents" in children, as opposed to the exclusive use of the term "giftedness."
- Provide and support release time for professional development outside of school. Administrators need to increase teacher, staff, and parent awareness through professional development opportunities and conferences.
- Provide teachers with time to share their ideas and successes with one another, parents, and community partners.
- Hold parent education meetings in informal settings outside the school environment.
- Consider that cultural and social differences may result in underidentification of gifted students if there is an overreliance on testing.

- Provide training to educators on cultural differences and awareness.
- Teach higher-level thinking skills to young children to help unleash their gifts and talents, making early identification possible.
- Identify as early as possible.
- Utilize community resources such as universities, libraries, and performing arts centers to form partnerships to benefit gifted children.
- Evaluate existing identification/admission policies for gifted education services to determine if the policies are working *against* traditionally underserved populations.
- Provide support to students from traditionally underserved populations once they are identified as being gifted.
- Provide opportunities for professional development and time to discuss what has worked and the problems that have been encountered to teachers, for whom alternative assessment is new. It takes time and practice to use these approaches effectively. Release time from regular duties should be given to teachers learning these approaches.

Full Range of Services

Goal three of Ohio's strategic plan for gifted education calls for "collaboration with regular education personnel in the provision of appropriate educational programs and services for all gifted students." The objective of Goal three was to broaden the range of services available to gifted students.

While self-contained classrooms, resource rooms, separate schools, and other grouping arrangements may be beneficial to some gifted students, the fact remains that gifted students in Ohio are spending the bulk of their school day in the regular classroom. The range of services available needs to be extended to provide services to gifted students in the regular classroom.

Youngstown City Schools developed the project — *Gifted Education's Model Services (GEMS): Radiating Excellence* — for the purpose of identifying gifted children traditionally underserved, and collaborating with the regular classroom teacher in the development and provision of educational and counseling services designed to meet student's individual needs.

The intent of the project was to offer a range of services, such as cluster grouping in the regular classroom, topical seminars, mentorships, postsecondary enrollment options, *Odyssey of the Mind*, curriculum compacting, and artists in residence programs. The participating schools collaborated with Youngstown State University to accomplish their goals.

Youngstown City Schools

Youngstown is an urban city located in the northeast part of Ohio. Once a major steel producer for the country, Youngstown has suffered economically from the dramatic decline of the steel industry in the area. The enrollment of the district is 14,008. Seventy-one percent of the students participate in the free and reduced lunch program, an indication of the level of poverty in the area. The district student population is 60.3 percent African American, 34 percent Caucasian, 5.3 percent Hispanic, and .4 percent "other."

Project personnel conducted a systemwide survey to assess the general level of teacher/administrator interest, commitment, and willingness to serve as project leaders. A cadre of 80 "teacher leaders" was identified. These 80 teacher leaders participated in a series of inservice programs, with workshops held during the school day — through the utilization of substitutes — after school, and during the summer.

Teachers were paid stipends or received graduate credit for their participation in the after-school or summer workshops. The most favored time for professional development by the teachers was during the summer because it did not take them out of the classrooms. Professional development was provided on the need for gifted education, the disadvantaged child, alternative assessment, the range of services, underachieving children, cluster grouping, multiple intelligences, integrating the arts, interdisciplinary teaching, curriculum compacting, and thinking skills.

Community education, which highlighted the need for gifted education services, was accomplished by informing the local parent gifted advocacy group of the project's progress, and through news releases submitted to the local media.

During the summer workshops, action plans were developed by teams of teachers. One of the notable developments among the regular classroom teachers was the realization that differential strategies improve instruction, not only for gifted children, but for all students in their class.

The project used pre- and post-inservice questionnaires to measure teacher attitudinal and instructional changes, the number of students nominated and identified for service, and the frequency with which teachers availed themselves of differentiated instructional materials to measure the success of incorporating services for gifted students into the regular classroom.

An analysis of the pre- and post-inservice questionnaires reflected changes in attitudes in areas dealing with pacing questions, the assumption that all students can benefit from questions or lessons structured around higher-thinking skills, and characteristics vs. stereotypes of gifted children. The following teacher comments affirm these additional changes:

> "Children do learn in different ways. That is why we need to teach in different ways."
>
> "These sessions have stimulated thought and enthusiasm for change and encouraged us to try new strategies to allow children to learn in their own unique and creative way."
>
> "I developed the *courage* to plan and use interdisciplinary units and other resources and to move away from textbook dependency."
>
> "All students should be taught in a gifted mode."

The project reported a 26 percent increase in the number of students identified as gifted and a 754 percent increase in the number of children served since the inception of the grant. These increases are due, in part, to the professional development provided, and the change in teacher perspective. Implementation of a board policy that emphasizes alternative assessment methodologies to avoid a single criterion of giftedness and encourages the availability of a full range of services, also contributed to the increase in the number of children identified and served.

This policy requires a differentiated curriculum, educational options, advanced course offerings, and a combination of groupings such as multiage primary classes, self-contained classes, and clustering within heterogeneous classrooms as determined by specific academic need and counseling. By adopting this policy, the district has provided a foundation for the implementation of a full range of services to meet the individual needs of youngsters.

Seventy-eight teachers — representing an increase of 1,114 percent — completed coursework or received professional development in gifted education. Additionally, every central office and building administrator attended at least one inservice session related to gifted education.

Table 3. Youngstown City Results

	Students Identified as Gifted	Students Served	Teachers Receiving Gifted Training
1991	1,467	112	7
1993	1,845	957	85
Increase	378	845	78
Percent Increase	25.77%	754.46%	1,114.29%

As a result of this project, the topics of "Gifted Pedagogy for All Learners" and "Meeting the Needs of Gifted Learners" appeared on the district's staff development/needs assessment questionnaire. In addition, an inservice series for principals was funded with Title I monies to make them aware of the benefits of gifted pedagogy for all learners — the first time that the needs of gifted students have been recognized by the district as an issue for professional development.

Another indication of success was an 84 percent increase in student participation and a 55 percent increase in building participation in the *Odyssey of the Mind* program. These increases resulted from the number of parents, principals, and regular classroom teachers who were exposed to the program via inservice sessions and parent meetings.

Northwest Local Schools

Northwest Local School District is located in Hamilton County, approximately 13 miles from downtown Cincinnati. The district is the 17th largest district in Ohio, serving over 10,000 students in two high schools, three middle schools, and nine elementary schools.

The goals of the project were to (1) provide inservice training to regular classroom teachers to assist them in instructing highly capable students in the area of language arts, (2) develop a curriculum qualitatively different for exceptional students in the area of language arts, and (3) assist teachers in developing teaching strategies to use with highly capable students.

In order to provide appropriate services to gifted students in the regular classroom, the project selected cluster grouping as a delivery system. All K-5 teachers and participating teachers were provided with awareness inservice on clustering.

Other inservice workshops dealt with differentiated curriculum, use of questions, creative thinking, and multiple intelligences. Second-grade teachers were given special instruction on what to look for when identifying students, and how to administer the *Otis-Lennon School Ability Test (OLSAT)* for identification purposes. The *OLSAT* was used in conjunction with subtests of the *Criterion Test of Basic Skills (CTBS)*, the *Critical Thinking Test*, and academic performance in the classroom for identification of students to participate in the cluster grouping for language arts.

Prior to this project, only five percent (approximately 40 students) of third graders were selected to participate in the fourth-grade *ACCESS Gifted Program*. After the first year of the program, 79 students, or 10 percent, were admitted to the program.

Westlake City Schools

Westlake City Schools are located in Cuyahoga County in the northeastern part of the state. Westlake is a middle class suburb of Cleveland with a population of 27,500. The district has approximately 3,800 students enrolled in one high school, two middle schools, and four elementary schools.

The intent of Westlake's *WINGS-Plus* project — *Westlake Instructional Network for Gifted Students-Plus* — was to develop a full range of services for gifted students throughout the school district. Collaboration among regular classroom teachers, family members, administrators, support staff, and community members was a strategic component in accomplishing the goals of the project. A high school mentorship program, a middle school enrichment program, and an elementary enrichment program were added to existing services for gifted students. The middle and elementary enrichment programs were developed for students who were identified by state standards, but who did not qualify by district standards as being gifted students. Enrichment was provided in the regular classroom.

The mentorship program was developed through the collaboration of the district gifted education coordinator, the high school gifted education coordinator, and the high school principal. When operational, the program will provide students an opportunity for individual study with a person within a particular tradition, discipline, profession, or craft, allowing students to pursue specific curricular areas beyond the scope of the course of study offered by the school. In addition to allowing students to learn about a chosen career, the mentorship program increases interaction between the school community and other professional communities.

Students are allowed to choose either a full mentorship of 120 hours over two semesters for one credit toward graduation, a half mentorship of 60 hours over one or two semesters for one-half credit, or a mini-mentorship of 30 hours over one semester for one-fourth credit. The full mentorship consists of 60 hours with the mentor, 30 hours with the liaison teacher, and 30 hours of independent study. The half mentorship involves 30 hours with the mentor, 15 hours with the liaison teacher, and 15 hours of independent study. A mini-mentorship involves 15 hours with a mentor, seven and one-half hours with the liaison teacher, and seven and one-half hours of independent study.

Students may nominate themselves or be nominated by any staff member or parent. A cumulative grade point average of 3.0 on a 4.0 scale is a prerequisite for participation in the mentorship program.

The enrichment program for gifted students in the regular classroom has provided materials to approximately 100 students in 52 different classrooms. The program has more than 200 Literature Lab titles, more than 200 research titles, 20 math centers, and 15 creative/critical thinking centers from which students can choose.

Students are referred by their classroom teachers or parents. After completing an interest inventory, the student participates in a conference with the gifted coordinator, classroom teacher, and parent. Appropriate materials are provided to the students and an *Enrichment Program Guideline Packet* is provided to parents and teachers.

Originally, the evaluation of the enrichment projects was to be done by teachers and be counted as extra credit for the students. After reviewing this policy at the request of the teachers, it was decided that the completion of enrichment packets would be a non-graded activity. Students are encouraged to present their projects to their classmates. Teachers make comments on the students' enrichment project record sheet, which is sent home to parents at the end of each semester. Copies are placed in the students' enrichment files in the gifted education office.

All regular classroom teachers were provided with inservice on methods for identifying gifted students. Nancy Johnson presented two workshops, *"Working with Gifted Children in the Regular Classroom"* and *"Surviving the 90's with a Gifted Child,"* to teachers and parents. Stipends were paid to teachers for participation in professional development on differentiating curriculum and using interdisciplinary units to meet the needs of gifted children, which was provided after school or on Saturday to avoid taking teachers out of the classroom.

Over 150 hours spent in constructing enrichment packets to be used by elementary and middle school students were logged by eight WINGS-Plus Advisory Board members, ten Junior Women's Club members, two retirement center residents, and two school employees. Parents of enrichment program students were invited to serve on the WINGS-Plus Advisory Board and to become members of *Friends of the Gifted*, a local parent support group.

The *Westlake Arts Council* has collaborated with the schools to recognize student achievement in the arts. Students who received superior ratings in the *Ohio Music Association* solo and ensemble contest have participated in a music recital. Art works by middle and high school students were displayed during the recital and judged by local artists. Awards were provided to the students by the *Arts Council*. During the project, 133 art students and 59 music students were recognized.

Of the three programs created, the elementary enrichment program was the most successful. The middle school program was redesigned and had not been fully implemented by the end of the project. The high school mentorship program is ready for implementation as soon as district financial support can be obtained.

Best Practices

- Use a cadre of teachers who are motivated and committed to trying new approaches to implement new strategies in the classroom.
- Provide time for teachers to share their new learnings.
- Make community education an essential component of gifted education programs in order to keep the needs of gifted students in front of the public.
- Make gifted education strategies, such as differentiated curriculum, a part of the regular classroom program for all students.
- Make alternative assessment methods and a full range of services for gifted students part of board policy for the district.
- Reflect the needs of gifted students in the district's professional development plan.
- Recognize that mentorships offer an excellent method for increasing interaction between the school community and other professional communities.
- Build flexibility into the individual components of the full range of services.

Differentiated Curriculum

Providing services to gifted students within the regular classroom presents a set of challenges for regular classroom teachers, as well as gifted education personnel. Much of our instruction is content-oriented rather than learner-oriented, resulting in an emphasis being placed on *what* content should be taught, rather than *how* it is learned.

When information is presented without regard to learning style, ability level, and student interest, the needs of students who are not yet ready for the material are ignored and the opportunity to allow new learning for students who have already mastered the material is missed. Clearly, to meet the needs of gifted students within the regular classroom, the curriculum must be compacted where mastery has been demonstrated, and extended to provide appropriate challenges.

Differentiation is the process of adapting curricula and instruction to meet the individual needs of each child or group of children. Differentiation addresses the pace of learning and the breadth of learning, allowing gifted students to learn at a faster pace and to pursue topics in greater depth.

In classrooms where differentiation occurs, there exist (1) a variety of ways for students to explore curriculum contents, (2) a variety of activities or processes through which students can come to understand and "own" information and ideas, and (3) a variety of options through which students can demonstrate or exhibit what they have learned (Tomlinson, 1995). The *Tic-Tac-Toe Menu for Differentiated Learning* (see page 31) describes options for differentiating curricula and instruction.

As part of creating a full range of services, Youngstown City Schools, Northwest Local Schools, and Westlake City Schools worked on "creating differentiated classrooms." Differentiation was also an integral part of the FY 1994-95 model projects.

Board policy in the Youngstown City Schools addresses the issue of pace and breadth of learning by requiring a differentiated curriculum that provides for acceleration and lateral expansion, both in content and in the process by which material is presented.

Critical and divergent thinking, creative problem solving, logical reasoning, research methods, intra and interpersonal skills, and oral/written communication are required parts of the differentiated curriculum. Board pol-

TIC-TAC-TOE MENU FOR DIFFERENTIATED LEARNING

Tiered Assignments In a heterogeneous class, a teacher uses varied levels of activities to ensure that students explore ideas at a level that builds on their prior knowledge and prompts continued growth. Student groups use varied approaches for exploration of essential ideas.	**Flexible Grouping** Students are matched to skills and work by virtue of readiness, not with the assumption that all need the same spelling task, computation drill, writing assignment, etc. Movement among groups is common, based on readiness on a given skill and growth in that skill.	**Learning Centers** Learning centers can be "stations" or collections of materials learners use to explore topics or practice skills. For gifted learners, learning centers should move beyond cursory exploration of topics and practice of basic skills, and should provide study in greater breadth and depth on interesting and important topics.
Curriculum Compacting A three-step process that (1) assesses what a student knows about material to be studied and what the student still needs to master, (2) plans for learning what is not known and excuses student from what is known, and (3) plans for freed-up time to be spent in enriched or accelerated study.	**Most Difficult First** When giving the class an assignment, start by determining which items represent the most difficult examples of the entire task. The students who can answer the most difficult correctly are given another option.	**Contracts** Contracts take a number of forms that begin with an agreement between student and teacher. The teacher grants certain freedoms and choices about how a student will complete tasks, and the student agrees to use the freedoms appropriately in designing and completing work according to specifications.
Independent Study A process through which the student and teacher identify problems or topics of interest to the student. Both student and teacher plan a method of investigating the problem or topic and identifying the type of product the student will develop. This product should address the problem and demonstrate the student's ability to apply skills and knowledge to the problem or topic.	**Questioning Techniques** In class discussions and on tests, the teacher attempts to ensure that the highly able learner is presented with questions that draw on advanced levels of information, require leaps of understanding, and challenge thinking.	**Mentorships** The student works with a resource teacher, media specialist, parent volunteer, or community member to develop and carry out all or part of a project or task. This is also a useful way to help students develop skills of production in a field and to develop career awareness.

From Winebrenner, S. (1992). *Teaching gifted kids in the regular classroom: Strategies and techniques every teacher can use to meet the academic needs of the gifted and talented.* Minneapolis, MN: Free Spirit Pub.

icy also excuses students — by curriculum compacting — from schoolwork on which they have demonstrated mastery. The district also provides for acceleration by offering advanced placement (AP) course offerings and postsecondary enrollment options.

Northwest Local Schools held inservices to help teachers become familiar with materials that would aid them in differentiating instruction. A materials fair was followed by a three-day session during which classroom teachers developed activities that were appropriate for students in grades 1, 2, and 3. Teachers were provided three days of training on how to use the Roger Taylor model for developing *HOTS* (higher-order thinking skills) activities. Emphasis was placed on the curriculum areas of reading, research, and creativity.

Westlake City Schools developed a menu of programs for gifted students (see Table 4).

The enrichment packets used by the elementary schools allowed students to pursue more in-depth study at their own rate of learning, while remaining in the regular classroom. As the title indicates, this approach is more of an enrichment activity, rather than differentiation, per se. However, connecting the packets to the curriculum allows for pace and breadth of learning to be addressed.

Table 4. Westlake Instructional Network for Gifted Students

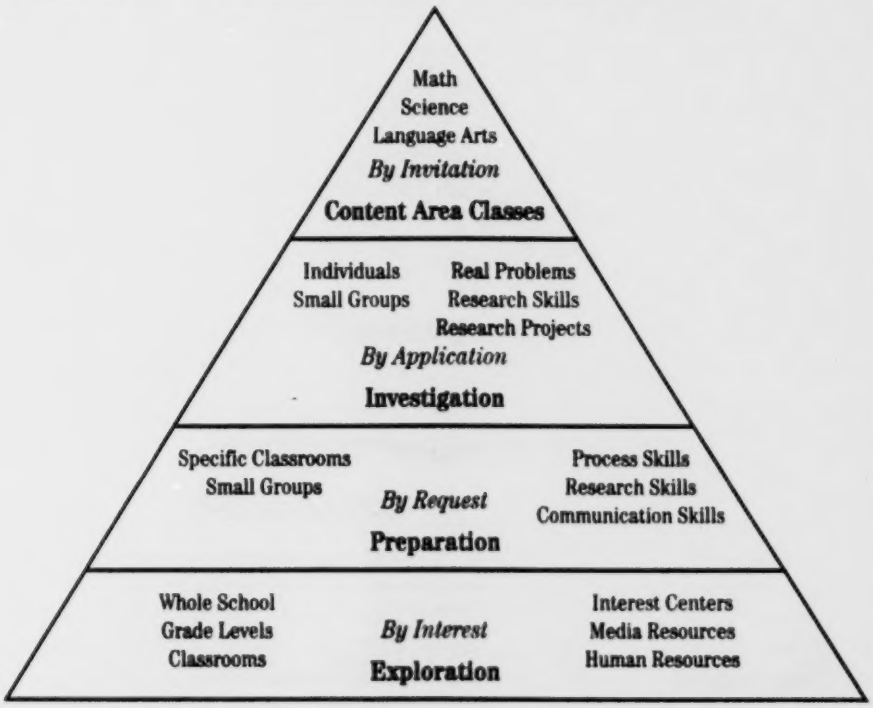
Elementary	Middle School	High School
Resource Room	Content Area Classes	Freshman Level Seminar Class
Math Enrichment		AP Classes, Honors Classes
Enrichment Packets in Regular Classroom		Countywide Seminars

The middle school program allows for participation based upon student interest or ability (see Figure 6), using a pyramid approach for the provision of services. The largest group of students can participate, based on their interests, in exploration of various subject matter. Interest centers, media resources, and resource personnel provide the mechanism by which students can work at their own rate of learning to pursue an interest in greater depth. Exploration is offered schoolwide, by grade level, or in individual classrooms.

Teachers or students can request that they be allowed to work on process skills, research skills, or communication skills by being assigned to specific classrooms or small groups. A smaller group of students is served by conducting research projects, working on real problems, or providing community service.

High interest and high achievement are the criteria for participating in the first three levels (see Figure 6). High achievement, interest, and high aptitude are the criteria for participating in the fourth level — the content area classes. Students must be identified by district criteria as being gifted to participate in this option.

Figure 6. WINGS Expanded Middle School Program



The high school program provides for seminar classes that allow gifted students to pursue specific interest areas. Honor classes and advanced placement classes provide a more challenging course of study.

CSNP Study FY 1994-95

The CSNP study of the FY 1994-95 model projects examined perceptions of gifted students with respect to class work. The responses provided in Table 5 suggest a general growth of differentiation practices (see statements C and D) when comparing FY 1993-94 and FY 1994-95 survey data.

Table 5. Perceptions of Gifted Students with Respect to Class Work

Statement	Percentage of respondents who agreed with the statement	
	FY 1993-94	FY 1994-95
A. I am working on a different assignment than students who are not in the gifted program.	57.8	60.6
B. I am doing extra work such as independent study outside the classroom.	55.7	58.2
C. I am moving through my class work at my own pace.	67.8	74.1
D. I am allowed to complete extra work outside the classroom.	66.5	80.7

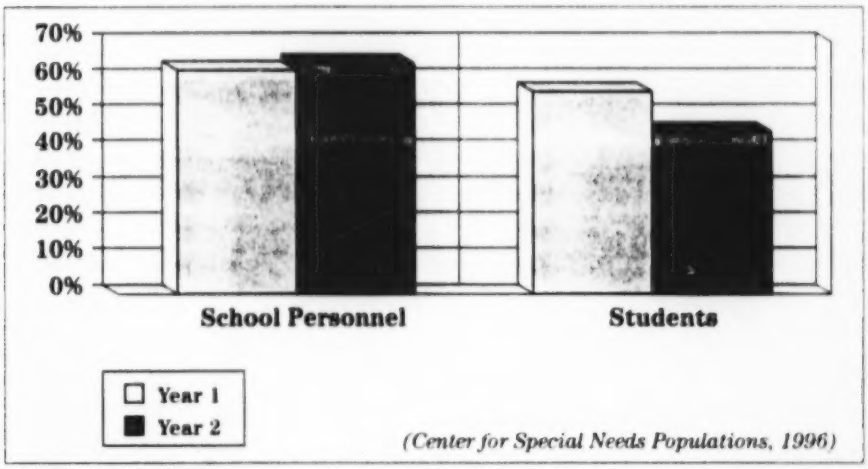
(Center for Special Needs Populations, 1996)

School personnel identified classroom materials as an important limiting factor affecting the education of children who are gifted. Only 16.1 percent of the surveyed school personnel indicated in year one that they had classroom materials to provide challenging opportunities to students who are gifted. As part of the project, materials were provided to classrooms.

After the second year of the project, 40.5 percent of school personnel indicated they had such materials, however, even though new materials had been provided, they believed that they needed even more.

Related to this issue are the perceptions of school personnel and students regarding grade-level textbooks (see Figure 7). Respondents were asked to agree or disagree with the following statement:

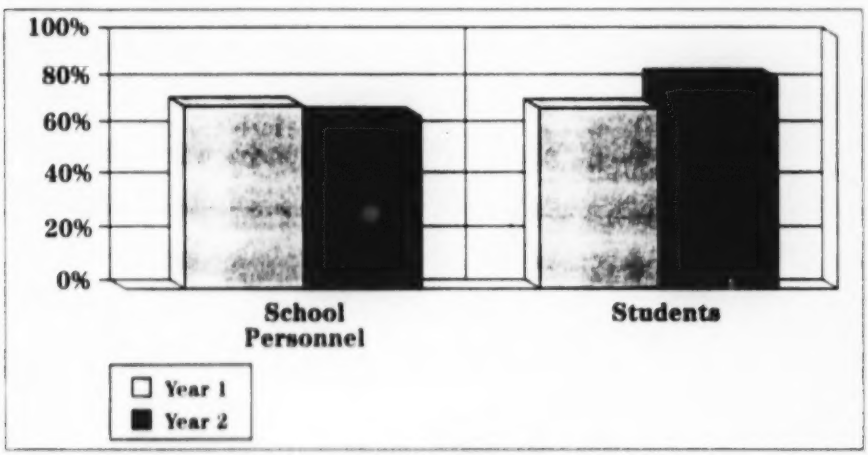
Figure 7. Grade-Level Textbooks Do Not Cover Topics with Enough Depth for Students Who Are Gifted.



(Center for Special Needs Populations, 1996)

The results of the study also suggest that grade-level curriculum does not offer challenging material for students who are gifted. Figure 8 illustrates the percentage of school personnel and students who agreed with the statement *"Students who are gifted already know a great deal of the material before the school year begins."*

Figure 8. Knowledge of Material Before School Year Begins

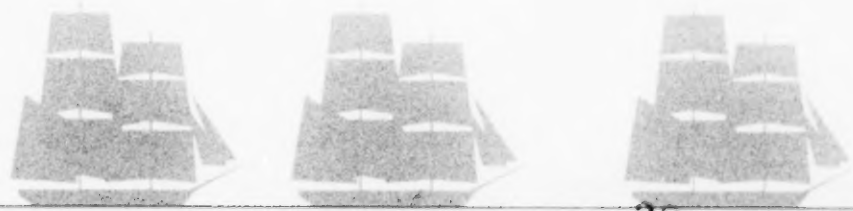


The teacher comments provided below imply that implementation of curriculum differentiation had positive effects for both teachers and students:

> "I look at students differently. Now I see these students more as bored, rather than unmotivated. These students like a variety, not standard curricula."
>
> "More able to differentiate for students. Accommodates different modalities and strengths of students."
>
> "Children came up with their own ideas and created activities for differentiation."
>
> "Teacher felt strategies worked and were readily usable (i.e., curriculum compacting for all students and letting all students create or extend research in areas of interest demonstrated by them)."

Best Practices

- Ensure that instruction and curriculum allow for flexible pacing and breadth of learning.
- Use flexible grouping to match students to skills and work by stages of readiness, rather than assuming that all students benefit from the same work.
- Use pretests to assess what a student knows, and plan for what a student still needs to master.
- Use acceleration as a strategy to differentiate services.
- Offer multiple texts and supplementary materials of varying levels of difficulty to students.
- Make available opportunities such as independent study, learning contracts, learning centers, and mentorships.
- Differentiate curriculum to be developmentally appropriate, child-centered, and responsive to the characteristics and needs of each child.
- Make available a range of options such as advanced placement classes and postsecondary options to students in secondary programs.
- Incorporate enrichment activities as part of differentiation. Enrichment should be based on the individual student's interest and ability and should stimulate self-direction of learning. Enrichment should be more than additional work of the same nature as the core curriculum.
- Encourage students to develop research and metacognition skills in order to help them become more independent learners.
- Use community resources to foster a sense of community and service.



Conclusion

The success of model projects described in this publication is the result of teachers, parents, administrators, coordinators, and community members working together and taking risks to chart new directions for serving the needs of gifted students. Their successes should be an inspiration to other districts interested in "navigating the waters of change."

Professional development was a major component of each model project. Teachers credited their participation in the workshops for helping broaden the way they viewed student populations and characteristics of gifted students. Professional development also helped teachers develop competencies in differentiating instruction and curriculum to enhance the learning taking place in their classrooms.

The benefits of application, practice, and having the opportunity to reflect on that action, were evident in the teacher journals that various projects used as data collection devices. The reflective practitioner needs to have time and support to critically examine teaching methods, style, and results. An important source of support for a teacher is other teachers. One of the biggest barriers to expanding the project's strategies within the participating schools was the lack of common planning time. Teachers found it very difficult to find time to share their experiences and to learn from their associates. One of the participating schools will be adopting block scheduling as a way to provide for more time to collaborate.

There was a high level of agreement on the need for parental involvement in their children's education. It was surprising that although parents felt involved, teachers welcomed them to become even more involved in their children's education.

Flexibility in the identification of and delivery of services to gifted youngsters provided a common foundation for all model projects. As project personnel began to look at learning styles, multiple intelligences, student interests, and varying ability levels, they realized that there is no *one best way* of meeting everyone's needs. Flexibility is needed in order to provide a full range of services to meet the diverse and individual needs of each student. In order to value, accept, and build on differences, we must address each child's unique strengths and learning needs.

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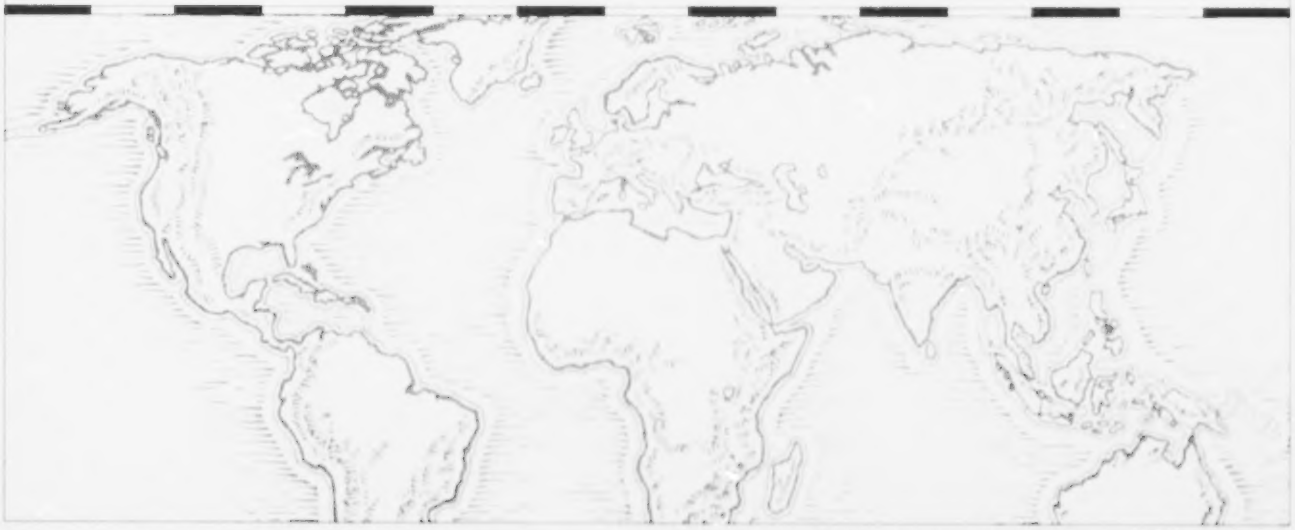

Participating Districts

FY 1992-93 Projects

Ashtabula County Educational Service Center
Mentorship Independent Study Project
Jesse W. Howard, Coordinator, Gifted Programs
1565 State Route 167, P.O. Box 186
Jefferson, Ohio 44047-0186
216-576-9023

Athens City School District
Improved Identification for Historically Underserved Populations of Young Gifted (K-3) Low Socioeconomic Students
Grier Graumlich, Coordinator of Gifted and Talented
Office of Special Services
15 E. Second Street
The Plains, Ohio 45780
614-797-4516

Columbus Public School District
Developing a Comprehensive Parent Guide for an Enrichment Program
Susan Amidon, Supervisor
873 Walcutt Avenue
Columbus, Ohio 43219
614-365-5290

Delaware City School District
Improved Identification of Gifted Minority Students in the Fifth Grade
Colleen Huckabee, Director, Enrichment Program
248 N. Washington Street
Delaware, Ohio 43015
614-363-1188

Elyria City School District
I'm Gate (Identifying Minority Gifted and Talented)
Mary Ann Koral, GATE Coordinator
Maplewood
2206 W. River Road
Elyria, Ohio 44035
216-284-8255

Elyria City School District
Parent Information Booklet
Mary Ann Koral, GATE Coordinator
Maplewood
2206 W. River Road
Elyria, Ohio 44035
216-284-8255 or 216-284-8255

Knox County Educational Service Center
Mentorship for Leadership: A Community Collaboration
Marianne Smietana-Harner
Gifted/Enrichment Coordinator
106 E. High Street
Mount Vernon, Ohio 43050
614-393-6767

Jackson Local School District (Stark County)
Teacher Assisted Mentorships
Rosalie Dolan, Coordinator, Gifted Program
Jackson Middle School
7355 Mudbrook Road, NW
Massillon, Ohio 44646
330-830-8034

Jackson Local School District (Stark County)
A Look at Gifted Education in Jackson Local Schools
Rosalie Dolan, Coordinator
Gifted Program
Jackson Middle School
7355 Mudbrook Road, NW
Massillon, Ohio 44646
330-830-8034

Lakewood City School District
"Into the Orient"
Wendy K. Stehlik, Coordinator
Gifted Education
1470 Warren Road
Lakewood, Ohio 44107
216-529-4203

Licking County Educational Service Center
The Math and Mentors Program
Dixie Reader or Beth Osborn
Coordinators of Gifted Education
675 Price Road
Newark, Ohio 43055
614-349-6087

Little Miami Local School District (Warren County)
Pilot in the Area of Mathematics: Girls Count
Sharon Franek, Academically Talented Programs
Morrow Elementary School
10 Miranda Avenue
Morrow, Ohio 45152
513-899-2741

Mayfield City School District
Ig=BEM: Identification of girls equals Better Futures in Mathematics
Harriet Bush, Coordinator
784 S.O.M. Center Road
Mayfield, Ohio 44143
216-442-2200, Ext. 220

Mercer County Educational Service Center
Mercer County Schools Career Mentorship Program
Carol Lewis and Elaine Freytag-Eichenauer
311 S. Main Street
Celina, Ohio 45822
419-586-6628

Miami County Educational Service Center
Mentorships
Shirley Tinnanow, TAG Coordinator
Courthouse
Troy, Ohio 45373
513-332-6987

North Olmsted City School District
Identification of Exceptional Potential in Young Children
Rhea I. Gaunt, Coordinator
24100 Palm Drive
North Olmsted, Ohio 44070
216-779-3558

Northwest Local School District (Hamilton County)
Cluster Model Program for Gifted
Mary Ellen Hartman, Gifted Education Coordinator
2762 Jonrose Avenue
Cincinnati, Ohio 45239
513-742-2200

Ottawa County Educational Service Center
Developing a Mentorship Program for High School Gifted Students
Connie Barron, Talented and Gifted Coordinator
314 W. Water Street
Oak Harbor, Ohio 43449
419-898-1318

Sandusky County Educational Service Center
Parent Informational Booklet
Diane Witt, Gifted/Talented Coordinator
602 W. State Street
Fremont, Ohio 43420
419-332-8214

Sandusky County Educational Service Center
Gifted Education Promotional Brochure
Diane Witt, Gifted/Talented Coordinator
602 W. State Street
Fremont, Ohio 43420
419-332-8214

Seneca County Educational Service Center
MBA (Mentor-Based Alliance) Program for Schools and Business
Jana Scherger
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Tiffin, Ohio 44883
419-447-2927

Shelby City School District
Schools and Communities: Making Mentorships Work
Sally Kleinman, Gifted and Talented Coordinator
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Shelby, Ohio 44875
419-347-1018

Southern Local School District (Perry County)
Mentorship and Community Based Program
Larry Saunders
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114 N. High Street
New Lexington, Ohio 43764
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Sidney City School District
Evaluation Model of a Comprehensive Program for Gifted Students
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Sidney, Ohio 45365
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Sugarcreek Local School District
(Greene County)
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Greene County Office of Education
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Yellow Springs, Ohio 45387
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Toledo City School District
Project BOOST
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Manhattan & Elm Streets
Toledo, Ohio 43608
419-729-8422

Toledo City School District
Project FIND
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Westlake City School District
WING Plus
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Wood County Educational Service Center
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Parent Information Calendar
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Director of Instructional Services
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Youngstown City School District
GEMS: Radiating Excellence
Maria C. Pappas, Supervisor
Gifted and Talented Programs
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Youngstown, Ohio 44501
330-744-6900 or 330-744-8779

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High School Mentorship Program
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Coordinator of Gifted Education
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Zanesville, Ohio 43701
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FY 1993-94 Projects

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Youngstown, Ohio 44507
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(Greene County)
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Bellefontaine, Ohio 43311
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Canton Local School District (Stark County)
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Canton, Ohio 44707
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Clearview Local School District
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Elyria, Ohio 44035
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Crooksville Exempted Village School District
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New Lexington, Ohio 43764
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Delaware, Ohio 43015
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Mary Ann Koral, Gifted Coordinator
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Elyria, Ohio 44035
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Erie County Educational Service Center
Libby Davis, Gifted Coordinator
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Sandusky, Ohio 44870
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Sidney, Ohio 45365
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Fairless Local School District (Stark County)
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Field Local School District (Portage County)
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Highland County Educational Service Center
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Holmes County Educational Service Center
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Millersburg, Ohio 44654
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Lakota Local School District (Sandusky County)
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Joel Fink, Assistant Superintendent
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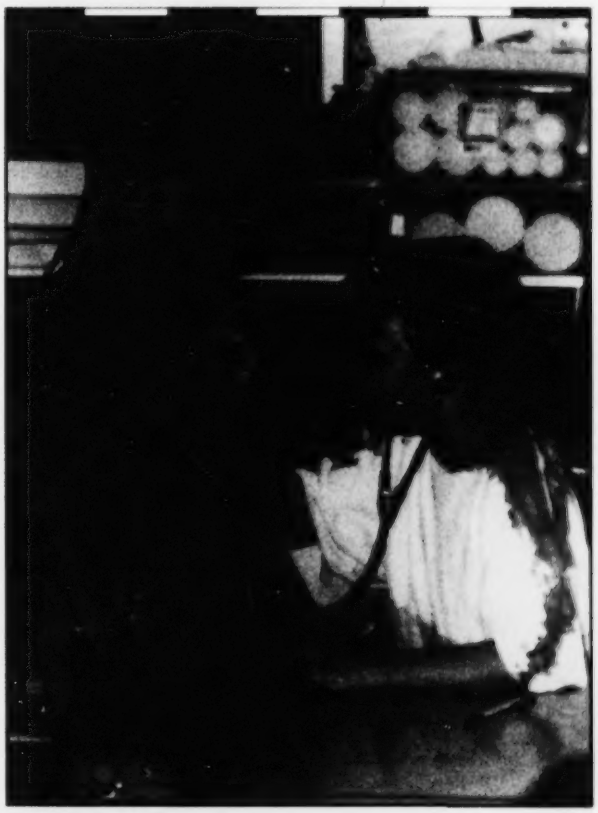

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